

REMARKS

Applicants thank the Examiner for total consideration given the present application. Claims 1-24 were pending prior to the Office Action. Claims 17-18 have been canceled and claims 25-29 have been added through this Reply. Therefore, claims 1-16 and 19-29 are currently pending. Claims 1, 2, 4, 7, 9-13, and 19-24 have been amended through this Reply. Applicants appreciate that the previous arguments filed on August 20, 2007 were found persuasive. However, claims 1-16 and 19-24 now stand rejected under a new ground(s) of rejection. Applicants respectfully request reconsideration of the rejected claims in light of the amendment and remarks presented herein, and earnestly seek timely allowance of all pending claims.

INTERVIEW SUMMARY

Applicants thank the Examiner for granting a telephone interview with the Applicants' representative on April 19, 2008. During the interview, the outstanding rejection under 35 U.S.C. §101 statutory requirements and possible amendments to overcome such rejection were discussed. Particularly, the Examiner suggested that an amendment to the independent claims to include, *inter alia*, "providing a pattern recognition or classification result in response to the hierarchical representation" would overcome the outstanding rejection. The Examiner also raised some issues regarding alleged indefiniteness of claims 17-24 under 35 U.S.C. §112, second paragraph. Although the Applicants' representative did not necessarily agree with the Examiner's contention that claims 1-24 are non-statutory and claims 17-24 are indefinite, claims 1, 2, 4, 7, 9-13, and 19-24 have been amended and claims 17 and 18 have been canceled through this Reply in order to expedite prosecution.

OBJECTION TO THE CLAIMS

Claim 1 stands objected for minor informalities. Applicants submit that the previous presentation of claim 1 which included "appropriate" (un-amended format) in line 5 was merely

a typographical error. This error has been corrected through this Reply. Accordingly, it is respectfully requested that this objection be withdrawn.

Claim Rejection - 35 U.S.C. § 101

Claims 1-24 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The Examiner has asserted that claims 1-24 recite functional and descriptive material, however, pursuant to the claimed recitation, the process described in the claims merely manipulates data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application. Particularly, the Examiner alleges that claims 1-24 do not involve transformation of an article or physical object to a different state or thing nor do they produce a useful, concrete, and tangible result. Applicants respectfully disagree. Claims 17 and 18 have been canceled through this Reply rendering the rejection as moot.

Applicants point out that MPEP § 2107 sets forth guidelines for the examination of patent applications under the "Utility Requirement". Under MPEP 2107, an invention is "useful" when the utility is specific, substantial, and credible. A utility is specific, if it is particular to the subject matter claimed. A substantial utility is found if one skilled in the art can use the claimed invention in a manner which provides some immediate benefit to the public. A credible utility is found if a person of ordinary skill in the art would accept that the recited or disclosed invention is currently available for such use. See MPEP 2107.

Applicants respectfully submit that the claimed invention satisfies the three-pronged test of "utility requirement" mentioned above. The claimed invention is directed to a specific subject matter which includes, *inter alia*, a method of providing an image data model representation derived from a plurality of images or a method of representing an image of an object or image by processing signals corresponding to the image. Such method clearly provides a substantial utility since it provides a "real world" use since the claimed invention is "concerned with image data and analysis of image or video content, in techniques such as object and face localisation or recognition." (*See page 1, lines 5 to 7, of the specification.*) This utility is also credible since a person of ordinary skill in the art would accept that the recited or disclosed invention is currently

available for such use. (*See page 3, lines 17-30 of the specification.*) A more detailed explanation has been provided below.

Claims 1, 26, 27 are Statutory

The method defined in claims 1, 26, and 27, and their dependent claims, operates directly on **input image data**, specifically data vectors for a plurality of images of an object (or image), and **outputs a generic data model** for the object (or image). The output generic data model is **stored** on an electronic storage medium **for use in image analysis**. This use is implicit in the claims, since the only possible application of a data model generated from **image data** is an image analysis application.

It is respectfully submitted that these claims are **not** directed to the judicial exception in the form of an abstract idea, specifically an algorithm. These claims are directed to a **process** which operates directly on input data of images of an object (or image), and outputs a (generic) **data model of the object** (or image), which is used in image analysis. **Images**, and the objects they contain, **are not abstract**.

The Federal Circuit established that a process, machine, manufacture or composition of matter employing a law of nature, natural phenomenon or abstract idea is patentable subject matter even though a law of nature, natural phenomenon or abstract idea is not. *In re Alappat*, 33 F.3d 1526, 1540, 31 USPQ2d 1545, 1554 (Fed. Cir. 1994) (*en banc*).

As demonstrated above, the claims are directed to **a process** that **employs an algorithm**, but **operates on image data which depicts a (physical) object (or image)**. These claims are **not** directed to the algorithm, as such.

Further, the claims infer pre-processing in the manner of **gathering image data comprising a plurality of images of an object** (or image). In addition, the claimed process **outputs a data model for the object** (or image) for use in image analysis.

The claimed process has a clear substantial practical application, as its output is a **data model of an object** (or image) that can (only) be used as **a model in image analysis**. This is a substantial practical application other than "with a computer or computing environment".

In *State Street*, the patented claim was directed to transforming **data representing discrete dollar amounts** through an algorithm into a **final share price**, which is a specific practical application that **did not pre-empt other uses and applications of the underlying math** (emphasis added). *State Street v. Signature Financial*, 47 USPQ2d 1596, 1601.

Similarly, in the present application, the claimed invention is directed to transforming **data representing images of an object** (or image) through an algorithm into a **final data model of the object**, which is a specific practical application that **does not pre-empt other uses and applications of the underlying math**. The claimed invention does not preclude use of the underlying math in relation to data that does not relate to images.

Accordingly, it is respectfully submitted that claims 1, 26, and 27, and their dependent claims are statutory.

Claim 11 is Statutory

The method defined in independent claim 11 and its dependent claims, operates directly on input image data, specifically a feature vector of an image of an object (or image) of interest, which uses a generic data model for the object (or image) of interest and outputs a representation of the image, in terms of the data model, for use in image analysis. Again, it is respectfully submitted that this use is implicit in the claims, since the only possible application of a **representation of an image** is an image analysis application.

Thus, the claim is directed to transforming **data representing an image of an object** (or image) through an algorithm into a **final representation of the image of the object** (or image), which is a specific practical application that does not pre-empt the use and application of the underlying math.

Accordingly, it is respectfully submitted that independent claim 11 and its dependent claims are statutory.

Claim 19 is Statutory

The method defined in claim 19 is directed to a method of matching or classifying images. Further, this claim has been amended to recite, *inter alia*, "outputting an image

matching or classification result” as suggested by the Examiner during the telephone interview of April 19, 2008. As acknowledged by the Examiner, the step of outputting an image matching or classification result involves producing a useful, concrete and tangible result.

Accordingly, it is respectfully submitted that claim 19 is statutory.

Claims 20 and 21 are Statutory

Claim 20 has been amended to recite, *inter alia*, “An **apparatus** . . . comprising: a **processor** . . . and a **memory**.” Thus, at least in view of this amendment, it is respectfully submitted that claim 20 and its dependent claim 21 are statutory.

Claims 22, 28, and 29 are Statutory

Claim 22 has been amended to recite, *inter alia*, “A **computer readable medium** having **stored thereon computer executable program** for providing an electronic representation of data distribution of data elements derived from a plurality of images for at least one object or image by processing signals corresponding to the plurality of images, the representation having a hierarchical structure, the **computer program when executed causes a computer system to execute steps of:** . . .” At least in view of this amendment, it is respectfully submitted that this claim is statutory.

New claims 28 and 29 also recite similar limitations as in claim 22. Thus, at least for the reasons stated with respect to claim 22, it is respectfully submitted that new claims 28 and 29 are statutory.

Pursuant to the above amendment and following remarks, Applicants do not concede that the prior recitation failed for the basis of not being directed to statutory subject matter, but in the spirit of compact prosecution, have further clarified the claimed invention and in doing so believe that the claimed invention as recited in claims 1-16 and 19-29 are clearly within the standard of statutory subject matter.

Therefore, for at least the above reasons, it is respectfully requested to withdraw the claim rejection under 35 U.S.C. §101.

Conclusion

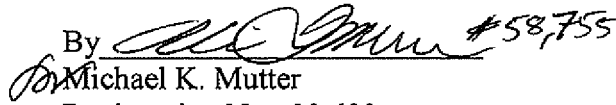
In view of the above remarks, it is believed that all pending claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Ali M. Imam, Reg. No. 58,755 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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